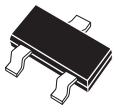
CMPT3640

PNP SILICON TRANSISTOR



SOT-23 CASE

Central™
Semiconductor Corp.

DESCRIPTION:
The CENTRAL SEMICONDUCTOR CMPT3640 type is a PNP silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for saturated switching applications.

MARKING CODE: C2J

MAXIMUM RATINGS: (T_A=25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	12	V
Collector-Emitter Voltage	V_{CEO}	12	V
Emitter-Base Voltage	V_{EBO}	4.0	V
Continuous Collector Current	I_C	80	mA
Power Dissipation	P_D	350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	357	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CES}	V_{CE}=6.0V		10	nA
I_{CES}	V_{CE}=6.0V, T_A=65°C		10	µA
I_B	V_{CE}=6.0V, V_{EB}=0		10	nA
BV_{CBO}	I_C=100µA	12		V
BV_{CEO}	I_C=10mA	12		V
BV_{EBO}	I_E=100µA	4.0		V
$V_{CE(SAT)}$	I_C=10mA, I_B=1.0mA		0.20	V
$V_{CE(SAT)}$	I_C=50mA, I_B=5.0mA		0.60	V
$V_{CE(SAT)}$	I_C=10mA, I_B=1.0mA, T_A=65°C		0.25	V
$V_{BE(SAT)}$	I_C=10mA, I_B=0.5mA	0.75	0.95	V
$V_{BE(SAT)}$	I_C=10mA, I_B=1.0mA	0.80	1.00	V
$V_{BE(SAT)}$	I_C=50mA, I_B=5.0mA		1.50	V
h_{FE}	V_{CE}=0.3V, I_C=10mA	30	120	
h_{FE}	V_{CE}=1.0V, I_C=50mA	20		
f_T	V_{CE}=5.0V, I_C=10mA, f=100MHz	500		MHz
C_{ob}	V_{CB}=5.0V, I_E=0, f=1.0MHz		3.5	pF
C_{ib}	V_{BE}=0.5V, I_C=0, f=1.0MHz		3.5	pF
t_d	V_{CC}=6.0V, V_{BE}=1.9, I_C=50mA, I_{B1}=5.0mA		10	ns
t_r	V_{CC}=6.0V, V_{BE}=1.9, I_C=50mA, I_{B1}=5.0mA		30	ns

R4 (26-September 2002)

Central™
Semiconductor Corp.

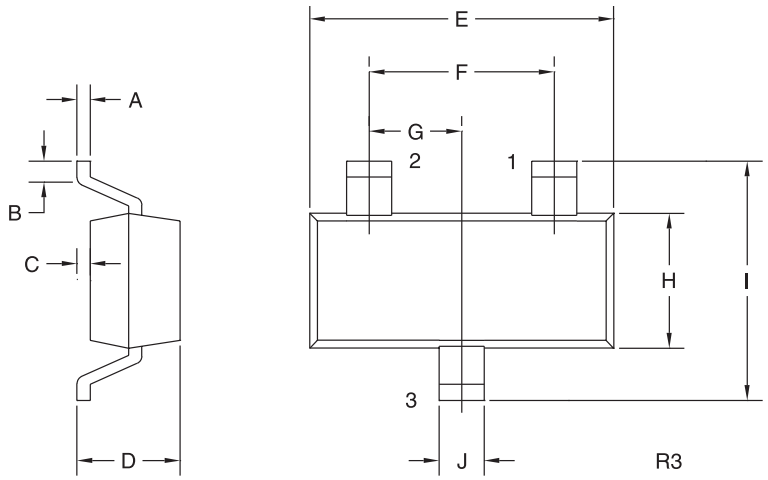
CMPT3640

PNP SILICON TRANSISTOR

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
t_s	V_{CC}=6.0V, I_C=50mA, I_{B1}=I_{B2}=5.0mA		20	ns
t_f	V_{CC}=6.0V, I_C=50mA, I_{B1}=I_{B2}=5.0mA		12	ns
t_{on}	V_{CC}=6.0V, V_{BE}=1.9, I_C=50mA, I_{B1}=5.0mA		25	ns
t_{on}	V_{CC}=1.5V, I_C=10mA, I_{B1}=0.5mA		60	ns
t_{off}	V_{CC}=6.0V, V_{BE}=1.9, I_C=50mA, I_{B1}=5.0mA		35	ns
t_{off}	V_{CC}=1.5V, I_C=10mA, I_{B1}=I_{B2}=0.5mA		75	ns

SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:
1) BASE
2) EMITTER
3) COLLECTOR

MARKING CODE: C2J

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R4 (26-September 2002)